L Number	Hits	Search Text	DB	Time stamp
1	13546	fault adj detection	USPAT;	2003/07/13
			US-PGPUB;	11:15
			EPO; JPO;	11.10
			DERWENT;	
			IBM TDB	
2	4	(fault adj detection) same (electrical	USPAT;	2003/07/13
		adj short)	US-PGPUB;	11:18
			EPO; JPO;	
			DERWENT;	
			IBM TDB	
3	0	(fault adj detection) same (line adj	USPAT;	2003/07/13
		filter)	US-PGPUB;	11:19
			EPO; JPO;	
			DERWENT;	
		45	IBM_TDB	
4	0	( ( power ad)	USPAT;	2003/07/13
		filter)	US-PGPUB;	11:19
			EPO; JPO;	
			DERWENT;	
5	406	/fault add detection) came filter	IBM_TDB	0000/07/10
~	100	(fault adj detection) same filter	USPAT;	2003/07/13
			US-PGPUB;	11:19
			EPO; JPO; DERWENT;	
			IBM TDB	
6	104	((fault adj detection) same filter) same	USPAT;	2003/07/13
		line	US-PGPUB;	11:19
			EPO; JPO;	11.19
			DERWENT;	
			IBM TDB	
7	4	(((fault adj detection) same filter) same	USPAT;	2003/07/13
		line) same measure	US-PGPUB;	11:23
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
8	41		USPAT;	2003/07/13
		line) same voltage	US-PGPUB;	11:36
[			EPO; JPO;	
			DERWENT;	
9	7853	electrical adj short	IBM_TDB	2002/07/12
	, ,,,,	erectical adj Short	USPAT;	2003/07/13
			US-PGPUB; EPO; JPO;	11:36
			DERWENT;	
			IBM TDB	
10	96	(electrical adj short) same filter	USPAT;	2003/07/13
		• • • • • • • • • • • • • • • • • • • •	US-PGPUB;	11:37
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
11	13	((electrical adj short) same filter) same	USPĀT;	2003/07/13
		line	US-PGPUB;	11:42
			EPO; JPO;	
			DERWENT;	
12	2	/"4536696"\ DN	IBM_TDB	0000 (07 (55
14	2	("4536686").PN.	USPAT;	2003/07/13
			US-PGPUB;	11:43
			EPO; JPO;	
			DERWENT;	
13	3	("4028593").PN.	<pre>IBM_TDB USPAT;</pre>	2003/07/13
	Ĭ	,	US-PGPUB;	11:43
	1		EPO; JPO;	11.40
			DERWENT;	
			IBM TDB	

14	2	("3573577").PN.	USPAT;	2003/07/13
			US-PGPUB;	11:43
			EPO; JPO;	
			DERWENT;	
15	2	("5227704").PN.	IBM_TDB	2002/07/10
		( 3227704 ).PN.	USPAT;	2003/07/13
			US-PGPUB;	11:57
			EPO; JPO; DERWENT;	
			IBM TDB	
16	2921	118/500	USPAT;	2003/07/13
		-13, 433	US-PGPUB;	11:57
			EPO; JPO;	11.57
			DERWENT;	
			IBM TDB	
17	2921	118/500	USPAT;	2003/07/13
			US-PGPUB;	11:57
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
18	419	118/500 and chuck	USPAT;	2003/07/13
			US-PGPUB;	11:58
			EPO; JPO;	
			DERWENT;	
19	122	(110/500 ) 1 1)	IBM_TDB	
19	133	(118/500 and chuck) and electrostatic	USPAT;	2003/07/13
			US-PGPUB;	11:59
			EPO; JPO;	1
			DERWENT;	
20	22	((118/500 and chuck) and electrostatic)	IBM_TDB	2002/07/12
20	22	and collar	USPAT;	2003/07/13
		and collar	US-PGPUB; EPO; JPO;	12:01
			DERWENT;	
			IBM TDB	
21	293	118/501	USPAT;	2003/07/13
			US-PGPUB;	12:01
			EPO; JPO;	
			DERWENT;	
			IBM TDB	1
22	35	118/501 and chuck	USPAT;	2003/07/13
			US-PGPUB;	12:15
			EPO; JPO;	
			DERWENT;	
0.0			IBM_TDB	
23	0	118/501 and electrostatic-chuck	USPĀT;	2003/07/13
			US-PGPUB;	12:16
			EPO; JPO;	
			DERWENT;	
24	18	118/501 and electrostatic	IBM_TDB	2002/07/12
		110,001 and electionedito	USPAT; US-PGPUB;	2003/07/13
			EPO; JPO;	12:17
			DERWENT;	
			IBM TDB	
25	21007	279/\$	USPAT;	2003/07/13
			US-PGPUB;	12:17
	]		EPO; JPO;	
			DERWENT;	
			IBM TDB	
26	4356	279/\$ and chuck	USPAT;	2003/07/13
			US-PGPUB;	12:17
			EPO; JPO;	
			DERWENT;	
27		/070 /4	IBM_TDB	
27	393	(279/\$ and chuck) and electrostatic	USPAT;	2003/07/13
			US-PGPUB;	12:18
			EPO; JPO;	
			DERWENT;	ĺ
L	1		IBM TDB	

28	28	((279/\$ and chuck) and electrostatic) and	IICDAT.	2002/07/12
20	20	((2/9/3 and chuck) and electrostatic) and	USPAT; US-PGPUB;	2003/07/13
		COLLAI		14:44
			EPO; JPO; DERWENT;	
29	36119	269/\$	IBM_TDB USPAT;	2003/07/13
-	30119	20074	US-PGPUB;	12:23
			EPO; JPO;	12:23
			DERWENT;	
			IBM TDB	
30	1897	269/\$ and chuck	USPAT;	2003/07/13
			US-PGPUB;	12:23
			EPO; JPO;	12.23
			DERWENT;	
			IBM TDB	
31	229	(269/\$ and chuck) and electrostatic	USPAT;	2003/07/13
_		(,	US-PGPUB;	12:23
			EPO; JPO;	12.23
			DERWENT;	
			IBM TDB	
32	9	((269/\$ and chuck) and electrostatic) and	USPAT;	2003/07/13
		collar	US-PGPUB;	12:26
			EPO; JPO;	
			DERWENT;	
			IBM TDB	
33	2077	(inverter converter) same fault same	USPAT;	2003/07/13
		(detection detector)	US-PGPUB;	13:15
		<b>'</b>	EPO; JPO;	
			DERWENT;	
			IBM TDB	
34	105	((inverter converter) same fault same	USPAT;	2003/07/13
		(detection detector)) same (short adj	US-PGPUB;	13:15
		circuit)	EPO; JPO;	
			DERWENT;	
			IBM TDB	
35	7	(((inverter converter) same fault same	USPAT;	2003/07/13
		(detection detector)) same (short adj	US-PGPUB;	13:19
		circuit)) same (open adj circuit)	EPO; JPO;	
		- -	DERWENT;	
			IBM_TDB	
36	31	((inverter converter) same fault same	USPAT;	2003/07/13
	[	(detection detector)) same (fault adj	US-PGPUB;	13:19
		protection)	EPO; JPO;	
			DERWENT;	
			IBM_TDB	

L Number	Hits	Search Text	DB	Time stamp
1	13546	fault adj detection	USPAT;	2003/07/13
			US-PGPUB;	11:15
			EPO; JPO;	11.15
			DERWENT;	
			IBM TDB	]
2	4	(fault adj detection) same (electrical	USPAT;	2003/07/13
		adj short)	US-PGPUB;	11:18
			EPO; JPO;	11110
			DERWENT;	
			IBM TDB	
3	0		USPAT;	2003/07/13
		filter)	US-PGPUB;	11:19
			EPO; JPO;	
			DERWENT;	
4	0	(fault add detection) same (was	IBM_TDB	
1		(fault adj detection) same (power adj	USPAT;	2003/07/13
	İ	IIICEI /	US-PGPUB;	11:19
			EPO; JPO;	
1			DERWENT;	
5	406	(fault adj detection) same filter	IBM_TDB USPAT;	2003/07/13
		, Jane 222002	US-PGPUB;	11:19
			EPO; JPO;	11.19
			DERWENT;	
			IBM TDB	
6	104	( (	USPAT;	2003/07/13
		line	US-PGPUB;	11:19
			EPO; JPO;	
			DERWENT;	
7	4	///famile and december	IBM_TDB	
'	4	(((fault adj detection) same filter) same line) same measure	USPAT;	2003/07/13
		Time/ same measure	US-PGPUB;	11:23
			EPO; JPO;	
			DERWENT; IBM TDB	
8	41	(((fault adj detection) same filter) same	USPAT;	2003/07/13
		line) same voltage	US-PGPUB;	11:36
			EPO; JPO;	11.30
			DERWENT;	
			IBM TDB	
9	7853	electrical adj short	USPAT;	2003/07/13
			US-PGPUB;	11:36
			EPO; JPO;	
			DERWENT;	
10	96	(electrical adj short) same filter	IBM_TDB	2222/27/12
		(Jesus and Short) Same filter	USPAT;	2003/07/13
			US-PGPUB; EPO; JPO;	11:37
			DERWENT;	
1			IBM TDB	
11	13	((electrical adj short) same filter) same	USPAT;	2003/07/13
		line	US-PGPUB;	11:42
			EPO; JPO;	
			DERWENT;	
12		(#4526606#) - 722	IBM_TDB	
14	2	("4536686").PN.	USPAT;	2003/07/13
			US-PGPUB;	11:43
ļ			EPO; JPO;	
			DERWENT;	
13	3	("4028593").PN.	IBM_TDB	2002/02/20
İ		,	USPAT;	2003/07/13
			US-PGPUB; EPO; JPO;	11:43
			DERWENT;	
			IBM TDB	

14	2	("3573577").PN.	USPAT;	2003/07/13
			US-PGPUB;	11:43
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	]
15	2	("5227704").PN.	USPAT;	2003/07/13
			US-PGPUB;	11:44
			EPO; JPO;	
	1		DERWENT;	
			IBM TDB	

**DERWENT-ACC-NO: 2003-198036** 

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DERWENT-

2003-198036

ACC-NO:

**DERWENT-** 200319

WEEK:

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TITLE:

Electrical short detection method in power devices of railway train propulsion system, involves measuring voltage across power line

49+63-77

filter for preset time, when initial voltage of filter is less than

predefined threshold

INVENTOR: KUMAR, A K; MCGARRY, J

PATENT-ASSIGNEE: KUMAR A K[KUMAI] , MCGARRY J[MCGAI]

PRIORITY-DATA: 2001US-0828382 (April 6, 2001)

PATENT-FAMILY:

LANGUAGE PAGES MAIN-IPC PUB-DATE PUB-NO

US 20020145842 Al October 10, 2002 N/A 009 H02H 003/08

APPLICATION-DATA:

APPL-DATE APPL-DESCRIPTOR APPL-NO PUB-NO

2001US-0828382 April 6, 2001 US20020145842A1 N/A

INT-CL (IPC): H02H003/08, H02H005/04

ABSTRACTED-PUB-NO: US20020145842A

## BASIC-ABSTRACT:

NOVELTY - An initial voltage across a power line filter is measured. When the measured voltage is less than a predefined threshold, the voltage developed across the filter for preset time interval is measured. When the magnitude of the developed voltage reached power line voltage within the preset time interval, the presence of electrical short condition is determined.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) a method for detecting faults indicative of electrical open condition in power devices of vehicle propulsion systems; and
- (2) a method for detecting electrical faulty conditions in power devices of vehicle propulsion systems.

USE - For detecting electrical short condition in power devices such as SCR, thyristor, solid state rectifiers used in propulsion system of vehicles such as trains, transit vehicles, etc.

**LERWENT-ACC-NO: 2003-198036** 

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ADVANTAGE - By measuring the voltage across the power line filter for preset time interval, the failure of the power devices can be quickly and reliably detected. Hence the vehicle operator is allowed to proactively arrange for repair and/or maintenance services, that prevent potentially costly collateral damage to other components of the propulsion system.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of the power circuit of the vehicle propulsion system.

CHOSEN-

Dwq.1/4

DRAWING:

TITLE-

ELECTRIC SHORT DETECT METHOD POWER DEVICE RAILWAY TRAIN PROPEL

TERMS:

SYSTEM MEASURE VOLTAGE POWER LINE FILTER PRESET TIME INITIAL VOLTAGE

FILTER LESS PREDEFINED THRESHOLD

DERWENT-CLASS: S01 U24 X13 X23

EPI-CODES: S01-G04A1; U24-F; X13-C01A; X23-A02G; X23-A05;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N2003-157308